

**Notice of Allowability**

Application No.

09/589,285

Applicant(s)

YU ET AL.

Examiner

Art Unit

Bridget E. Bunner

1647

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment of 22 January 2004.
2. ☒ The allowed claim(s) is/are 107-110, 113-116, 119, 121, 126-130, 133, 135, 140-144, 147, 149, 212-213, 216-218, 221-222, 225-227, 230-233, 279-286, 289-293, 296-308, 311-315, 318-330, 333-337, 340-350.
3. ☒ The drawings filed on 22 January 2004 are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some\* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>5/3/02</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                             | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance             |
|  | 9. <input type="checkbox"/> Other _____   |

## DETAILED ACTION

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michelle Shannon on 14 May 2004.

The application has been amended as follows:

Please cancel claims 89-95, 98-104, 214, 215, 223, 224, 275-278, 287, 288, 294, 295, 309, 310, 316, 317, 331, 332, 338, and 339.

Please amend claims 212, 213, 221, 222, 230, 285, 286, 292, 293, 307, 308, 314, 315, 328-330, 336 and 337 as follows.

212. (Currently Amended) A method of stimulating B lymphocyte proliferation, differentiation or survival comprising administering to an individual, an effective amount of a protein consisting of a first amino acid sequence which is 90% or more identical to a second amino acid sequence consisting of amino acid residues 134-285 of SEQ ID NO:2, wherein the protein having said first amino acid sequence stimulates B lymphocyte proliferation, differentiation, or survival. ~~comprising an amino acid sequence selected from the group consisting of:~~

(a) ~~the amino acid sequence of amino acid residues n to 285 of SEQ ID NO:2, where n is an integer in the range of 2-190;~~

(b) ~~the amino acid sequence of amino acid residues 1 to m of SEQ ID NO:2, where m is an integer in the range of 274-284; and~~

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~~(c) the amino acid sequence of amino acid residues n to m of SEQ ID NO:2;~~  
~~where n is an integer in the range of 2-190 and m is an integer in the range of 274-284;~~  
~~wherein the protein having said amino acid sequence can be used to generate or~~  
~~select for an antibody that specifically binds the polypeptide of SEQ ID NO:2.~~

213. (Currently Amended) The method of claim 212 wherein the protein consists of a first amino acid sequence which is 95% or more identical to said second amino acid sequence.  
~~comprises amino acid sequence (a).~~

221. (Currently Amended) A method of stimulating B lymphocyte proliferation, differentiation or survival comprising administering to an individual, an effective amount of a protein comprising a first amino acid sequence that is 90%95% or more identical to a second amino acid sequence consisting of amino acid residues 134-285 of SEQ ID NO:2, wherein the protein having said first amino acid sequence stimulates B lymphocyte proliferation, differentiation, or survival. ~~selected from the group consisting of:~~

~~(a) — the amino acid sequence of amino acid residues n to 285 of SEQ ID NO:2;~~  
~~where n is an integer in the range of 2-190;~~

~~(b) — the amino acid sequence of amino acid residues 1 to m of SEQ ID NO:2;~~  
~~where m is an integer in the range of 274-284; and~~

~~(c) — the amino acid sequence of amino acid residues n to m of SEQ ID NO:2;~~  
~~where n is an integer in the range of 2-190 and m is an integer in the range of 274-284;~~

~~wherein the protein having said first amino acid sequence can be used to generate or select for an antibody that specifically binds the polypeptide of SEQ ID NO:2.~~

222. (Currently Amended) The method of claim 221 wherein the protein comprises a first amino acid sequence which is 95% or more identical to said second amino acid sequence.  
~~sequence amino acid sequence (a).~~

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230. (Currently Amended) A method of stimulating B lymphocyte proliferation, differentiation or survival comprising administering to an individual, ~~[[a]]~~ an effective amount of a protein consisting of an amino acid sequence of amino acid residues 134-285 of SEQ ID NO:2.

285. (Currently Amended) A method of stimulating B lymphocyte proliferation, differentiation or survival comprising contacting B lymphocytes with an effective amount of a protein consisting of a first amino acid sequence which is 90% or more identical to a second amino acid sequence consisting of amino acid residues 134-285 of SEQ ID NO:2, wherein the protein having said first amino acid sequence stimulates B lymphocyte proliferation, differentiation, or survival. ~~comprising an amino acid sequence selected from the group consisting of:~~

(a) ~~the amino acid sequence of amino acid residues n to 285 of SEQ ID NO:2, where n is an integer in the range of 2-190;~~

(b) ~~the amino acid sequence of amino acid residues 1 to m of SEQ ID NO:2, where m is an integer in the range of 274-284; and~~

(c) ~~the amino acid sequence of amino acid residues n to m of SEQ ID NO:2, where n is an integer in the range of 2-190 and m is an integer in the range of 274-284;~~

~~wherein the protein having said amino acid sequence can be used to generate or select for an antibody that specifically binds the polypeptide of SEQ ID NO:2.~~

286. (Currently Amended) The method of claim 285 wherein the protein consists of a first amino acid sequence which is 95% or more identical to said second amino acid sequence. ~~comprises amino acid sequence (a).~~

292. (Currently Amended) A method of stimulating B lymphocyte proliferation, differentiation or survival comprising contacting B lymphocytes with an effective amount of a protein comprising a first amino acid sequence that is 90% 95% or more identical to a second amino acid sequence consisting of amino acid residues 134-285 of SEQ ID NO:2, wherein the protein having said first amino acid sequence stimulates B lymphocyte proliferation, differentiation, or survival. ~~selected from the group consisting of:~~

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(d) — the amino acid sequence of amino acid residues n to 285 of SEQ ID NO:2, where n is an integer in the range of 2-190;

(e) — the amino acid sequence of amino acid residues 1 to m of SEQ ID NO:2, where m is an integer in the range of 274-284; and

(f) — the amino acid sequence of amino acid residues n to m of SEQ ID NO:2, where n is an integer in the range of 2-190 and m is an integer in the range of 274-284;

wherein the protein having said first amino acid sequence can be used to generate or select for an antibody that specifically binds the polypeptide of SEQ ID NO:2.

293. (Currently Amended) The method of claim 292 wherein the protein comprises a first amino acid sequence which is 95% or more identical to said second amino acid sequence. amino acid sequence (a):

307. (Currently Amended) A method of stimulating T lymphocyte proliferation or differentiation comprising administering to an individual, an effective amount of a protein consisting of a first amino acid sequence which is 90% or more identical to a second amino acid sequence consisting of amino acid residues 134-285 of SEQ ID NO:2, wherein the protein having said first amino acid sequence stimulates T lymphocyte proliferation or differentiation. comprising an amino acid sequence selected from the group consisting of:

(g) the amino acid sequence of amino acid residues n to 285 of SEQ ID NO:2, where n is an integer in the range of 2-190;

(h) the amino acid sequence of amino acid residues 1 to m of SEQ ID NO:2, where m is an integer in the range of 274-284; and

(i) the amino acid sequence of amino acid residues n to m of SEQ ID NO:2, where n is an integer in the range of 2-190 and m is an integer in the range of 274-284;

wherein the protein having said amino acid sequence can be used to generate or select for an antibody that specifically binds the polypeptide of SEQ ID NO:2.

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308. (Currently Amended) The method of claim 307 wherein the protein consists of a first amino acid sequence which is 95% or more identical to said second amino acid sequence.~~comprises amino acid sequence (a).~~

314. (Currently Amended) A method of stimulating T lymphocyte proliferation or differentiation comprising administering to an individual, an effective amount of a protein comprising a first amino acid sequence that is ~~90%~~95% or more identical to a second amino acid sequence consisting of amino acid residues 134-285 of SEQ ID NO:2, wherein the protein having said first amino acid sequence stimulates T lymphocyte proliferation or differentiation.~~selected from the group consisting of:~~

~~(j) the amino acid sequence of amino acid residues n to 285 of SEQ ID NO:2, where n is an integer in the range of 2-190;~~

~~(k) the amino acid sequence of amino acid residues 1 to m of SEQ ID NO:2, where m is an integer in the range of 274-284; and~~

~~(l) the amino acid sequence of amino acid residues n to m of SEQ ID NO:2, where n is an integer in the range of 2-190 and m is an integer in the range of 274-284;~~

~~wherein the protein having said first amino acid sequence can be used to generate or select for an antibody that specifically binds the polypeptide of SEQ ID NO:2.~~

315. (Currently Amended) The method of claim 314 wherein the protein comprises a first amino acid sequence which is 95% or more identical to said second amino acid sequence.~~amino acid sequence (a).~~

328. (Currently Amended) The method of claim ~~325~~ 327 wherein said protein is labeled.

329. (Currently Amended) A method of stimulating T lymphocyte proliferation or differentiation comprising contacting T lymphocytes with an effective amount of a protein consisting of a first amino acid sequence which is 90% or more identical to a second amino acid sequence consisting of amino acid residues 134-285 of SEQ ID NO:2, wherein the protein

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having said first amino acid sequence stimulates T lymphocyte proliferation or differentiation  
comprising an amino acid sequence selected from the group consisting of:

(m) ~~the amino acid sequence of amino acid residues n to 285 of SEQ ID NO:2,~~  
~~where n is an integer in the range of 2-190;~~

(n) ~~the amino acid sequence of amino acid residues 1 to m of SEQ ID NO:2,~~  
~~where m is an integer in the range of 274-284; and~~

(o) ~~the amino acid sequence of amino acid residues n to m of SEQ ID NO:2,~~  
~~where n is an integer in the range of 2-190 and m is an integer in the range of 274-284;~~

~~wherein the protein having said amino acid sequence can be used to generate or~~  
~~select for an antibody that specifically binds the polypeptide of SEQ ID NO:2.~~

330. (Currently Amended) The method of claim 329 wherein the protein consists of a  
first amino acid sequence which is 95% or more identical to said second amino acid  
sequence comprises amino acid sequence (a).

336. (Currently Amended) A method of stimulating T lymphocyte proliferation or  
differentiation comprising contacting T lymphocytes with an effective amount of a protein  
comprising a first amino acid sequence that is 90%95% or more identical to a second amino acid  
sequence consisting of amino acid residues 134-285 of SEQ ID NO:2, wherein the protein  
having said first amino acid sequence stimulates T lymphocyte proliferation, proliferation or  
differentiation selected from the group consisting of:

(p) ~~the amino acid sequence of amino acid residues n to 285 of SEQ ID NO:2,~~  
~~where n is an integer in the range of 2-190;~~

(q) ~~the amino acid sequence of amino acid residues 1 to m of SEQ ID NO:2,~~  
~~where m is an integer in the range of 274-284; and~~

(r) ~~the amino acid sequence of amino acid residues n to m of SEQ ID NO:2,~~  
~~where n is an integer in the range of 2-190 and m is an integer in the range of 274-284;~~

~~wherein the protein having said first amino acid sequence can be used to generate~~  
~~or select for an antibody that specifically binds the polypeptide of SEQ ID NO:2.~~

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337. (Currently Amended) The method of claim 336 wherein the protein comprises a first amino acid sequence which is 95% or more identical to said second amino acid sequence, amino acid sequence (a).

***Informal Examiner's Amendment***

2. At pg 22, line 1, of the specification, paragraph [0066], the Examiner has amended the specification to indicate that the neutrokin- $\alpha$  amino acid sequence shown in Figures 7A-1 to 7A-2 is SEQ ID NO: 2. (Support can be found throughout the specification.)

***Conclusion***

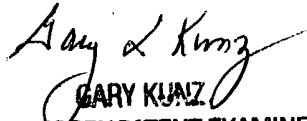
The Examiner's amendment to the claims served to clarify the claims. Applicant has the right to file divisional or continuation applications to protect the inventions in the cancelled claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bridget E. Bunner whose telephone number is (571) 272-0881. The examiner can normally be reached on 8:30-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Kunz can be reached on (571) 272-0887. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BEB  
Art Unit 1647  
14 May 2004

  
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